

Oral History

Name: Edward LaMotte

Date of Interview: February 14, 2004

Location of Interview: Residence of Jerry Grover in Tigard, OR

Interviewer: Jerry Grover

Approximate years worked for Fish and Wildlife Service: 37 years

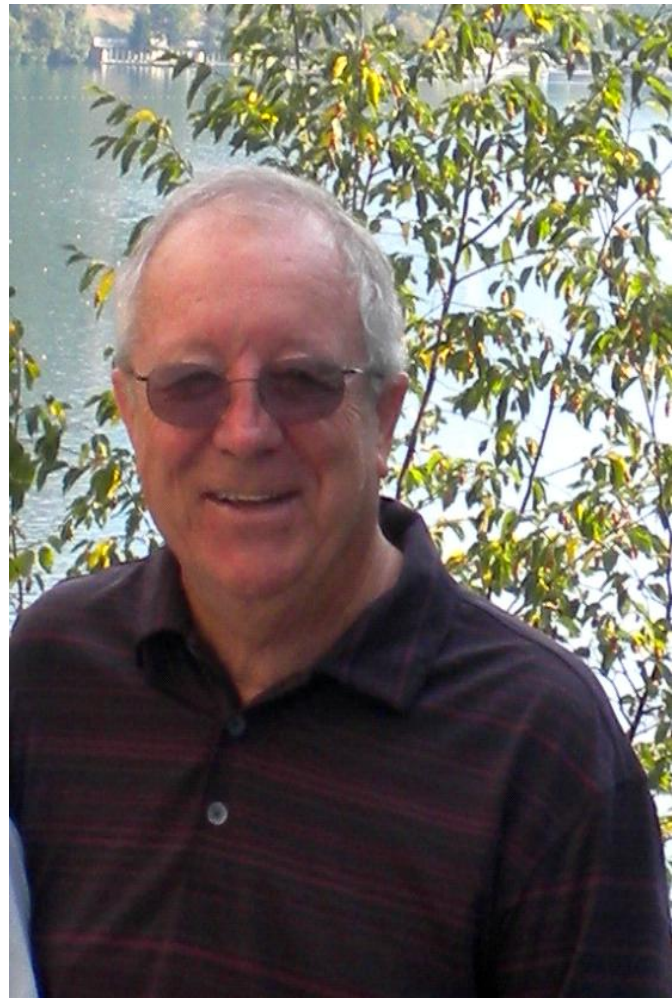
Offices and Field Stations Worked, Positions Held: Coleman National Fish Hatchery, Ennis Montana, Spring Creek National Fish Hatchery, Little White Salmon National Fish Hatchery, assistant manager at Hotchkiss Colorado, assistant manager at Berlin New Hampshire NFH, manger North Attleboro NFH, manager Greers Ferry NFH and retired as project leader at Spring Creek NFH on the Columbia River.

Most Important Projects: Trying new techniques at Spring Creek National Fish Hatchery.

Colleagues and Mentors: Henn Gruenthal, Bill Baker, Tom French, Ray Johnson, Wayne Olson, Dave Bruhn, Paul Handy

Most Important Issues: Problem at Berlin, New Hampshire with meeting production goals; soft shell eggs at Spring Creek; and problems at Greers Ferry Dam with manganese in the water.

Brief Summary of Interview: Ed was raised in southern California, went to junior college and then to Humboldt State in northern California majoring in Fisheries Biology. He talks about his first job with Fish and Wildlife Service then being drafted into the Army during the Vietnam War, coming back home, getting married and his different work experiences at the various hatchery's that he worked at. He also mentions hatchery housing, Fish and Wildlife Service then verses now, various people he worked with, how he would encourage young people to join the Fish and Wildlife and tell them not to be afraid of moving around. He also speaks of the lows and highs during his time with the Service and how he really enjoyed his time with them.



Ed LaMotte

Current: Ed and wife Kathy have retired to their home in Underwood, Washington.

**Oral History Program
U.S. Fish and Wildlife Service
National Conservation Training Center
Shepherdstown, West Virginia**

THE ORAL HISTORY

Jerry: Good afternoon, this is Jerry Grover a retired Fish & Wildlife Service Ecological Services & Fishery supervisor in the Portland Regional Office. I'm doing an oral history today with Ed LaMotte regarding his career with the U.S. Fish and Wildlife Service. The purpose of this interview is part of a program to preserve the heritage and culture of the U. S. Fish & Wildlife Service through the eyes of its employees. It's February 14, 2004 and I have also with me Kathy LaMotte and Judy Grover. Would you state your name for the record.

Ed: Yes it's L a capital M o t t e. Ed LaMotte

Jerry: And Ed, what was your job when you retired?

Ed: I was a project leader at the Spring Creek National Fish Hatchery, Underwood, Washington. I was fortunate enough to be there for just a little over 18 years. That's a long time, yes.

Jerry: Ed what got you interested in fisheries? How did you end up in this field?

Ed: Well I was raised in southern California and when I was young we did a lot of camping in the High Sierra's, did a lot of fishing when I was a kid and one of the things that we used to do quite often was visit a lot of state fish hatcheries. I always enjoyed those visits. But when I finished high school and went on to college I actually started out to be a dentist. I went to junior college for several years and took a lot of classes and my interest kind of changed. I took enough science classes that I got kind of interested in going into a natural resources field. Humboldt college up in northern California gave degrees

in Fisheries Biology's and I decided that maybe that's what I'll get into. I enrolled at Humboldt State University and finished with a degree in Fisheries Biology. I was fortunate enough to get a career conditional appointment with the U. S. Fish and Wildlife Service in 1967 so that when I graduated I started working for the Fish and Wildlife Service at the Coleman National Fish Hatchery, Anderson, California.

Jerry: Did you work for the State at all during the summers?

Ed: The first job I had was at Coleman in the summer of 1967. It was kind of like a fluke; my roommate at school said they were giving a test down at the post office for summer jobs with the Government. So I went down and took the test. At the same time I had written letters to almost all the state agencies and the provinces of Canada looking for a summer job. I took the test and a few weeks went by and I actually got an offer for a job to work in the Alberta Province in Canada and with its fisheries department.

I was going to accept that job but it was just a couple days before that I had an interview with the Fish and Wildlife Service person from Portland, Oregon. About week after that I got a call from that individual saying, "Hey, we would like to have you work this summer at Coleman." And so I'm in a quandary. I had an offer for a job in Canada and I also had this offer. Canada sounded pretty interesting but for some reason or another I took the job with the Fish and Wildlife Service. I didn't know it at the time but it was actually a career conditional appointment, which was actually a permanent job on the stipulation that I graduate. So I worked that summer at Coleman and it wasn't until the end of the summer that I realized that actually I had a job when I graduated. So it worked out that I graduated on a Friday, the next year, and that following Monday, I was back over at Coleman working.

Jerry: You kind fell right into it.

Ed: I was really fortunate because if I remember there were 28 individuals that graduated with me that year with a Fisheries

Degree and of the 28 I think there were only three of us that actually got jobs. I felt pretty fortunate.

Jerry: And you were a GS -482-5?

Ed: Actually that summer I was hired as a GS-4, but then when I graduated and came back the next year after graduation, I was a GS-5.

Jerry: So you began your career with the Fish and Wildlife Service not having worked prior with the state or the Forest Service? How did we get to know each other?

Ed: No, I started with the Service right off the bat. You were the Assistant Manager at Coleman and my supervisor when I started.

Jerry: But you didn't stay there too long because then you had a major interruption.

Ed: Yes, I was drafted into the Army and spent a tour of duty in Vietnam and survived that and came back and got my permanent job back. At that time they sent me to the National Fish Hatchery at Ennis, Montana. And I spent two years in Ennis. It was during that time frame that Montana was still part of Region 1 and at the end of the second year in Montana they were forming a new Region 6. For whatever reason, Region 1 decided to keep me within Region 1 before the switch over to Region 6, where Montana was going. They transferred me to Spring Creek Hatchery on the Columbia. I spent a year and a half at the Spring Creek Hatchery, which was at that time being remodeled from a small hatchery to a large new, modern water recirculation and with all new automated feeding systems.

Jerry: What grade were you at that time Ed?

Ed: At that time I was a GS-7.

Jerry: And when you went to Montana?

Ed: I got a GS-7 when I got out of the service when I went to Montana. It was a lateral transfer to Spring Creek. I spent a year and a half at Spring Creek and they came to me again and asked, "We want you to go down to Little White Salmon Hatchery." So I went to Little White Salmon Hatchery, which was just down the road 4 or 5 miles and I spent a year and a half at Little White Salmon Hatchery. I was still a GS-7.

And so I, at that time I'd worked for the Service...oh about 5, 5½. . . and back during those days as a trainee you were basically doing a lot of the grunt work. I mean I basically for four or five years there fed fish and cleaned ponds. And from a young man that was raised in California and never saw snow before and did a tour of duty in Vietnam that was just the thing for me. I didn't have to think about anything just get out there and feed those fish and clean the ponds and do the things that had to be done to accomplish the job at a hatchery.

And it was great background for me because I learned what it took to get the job done and one of the changes I've noticed over the years and now days you get a young person, hire a young person that works in a hatchery they want to move. They want to move quickly through the system. They don't necessarily want to spend a lot of time learning the nuts and bolts, you know, they want to move on a little faster track than I did. But back then it wasn't quite as a fast track it was more of a philosophy. It was to get a lot of good experience and then move the individual up more slowly. So I moved on after a year and half.

Jerry: But also during this time, didn't you have another major change in your life? Wasn't there a person called Kathy?

Ed: Yes. When I got back from Vietnam and before I went to Montana, I got engaged to my wife Kathy, who I met during college. And when I got back and went to Montana, it was a long way from California and too far to commute. So we decided to get married and I brought her to Montana, which was

probably the first time she'd been out of the state of California. So it was a big change for her. We spent 2 years there and we really enjoyed Montana. It was a small community and we had a lot of nice people there and really enjoyed my job in Montana.

Jerry: So now you're married and you got a wife and you're at Little White Salmon NFH for a year and a half; I didn't mean to interrupt you. What happened after Little White?

Ed: While at Little White I started applying for some jobs, assistant manager jobs. The first two jobs I put in for came open at the same time; one at Hotchkiss, Colorado, and the other one was at Saratoga, Wyoming. And they were assistant manager jobs. Low and behold I got one of them, in fact I understood I was selected for both of them and the managers got together and I guess they flipped a coin. I managed to get the job, the assistant manager's job, at Hotchkiss, Colorado.

At that time my wife was pregnant and we were having our first child. She was 7 months pregnant and here we are moving to Colorado. So we moved to Colorado and Hotchkiss was one of those hatcheries that is just picturesque and located in a place that a lot of people would probably retire there if they could. It was one of those places. It was one of those places a lot of Service fishery people considered one of the plum jobs to be at. We spent 4 years at Hotchkiss, and we had our second child there also.

Jerry: That was primarily a trout hatchery?

Ed: That was a trout hatchery and it was the place where I really had the opportunity to learn how to raise fish. I mean as far as the management of it, as far as planning a program and planning distribution and...all the nuts and bolts of that and I also was learning how to supervise people, how to work with people. I was learning to before

but I never was in a position where I actually had to tell somebody how to do something or what to do. And I was lucky, lucky I had a manager there named Bud Butterfield who after about 2 weeks, just gave me indications that he had confidence in me, felt that I knew what I was doing and just let me go do it and backed off. It gave me a lot of confidence and allowed me to do my job. And he basically empowered me and I was pretty good...being that I was first time assistant manager.

I hadn't had the opportunity to go to any of the 9-month courses or anything like they had at Spearfish, SD, or Leetown, WV. I was kind of pretty green although I wasn't green in the fact that I had already been on four hatcheries and I knew how they operated and I understood what it took to get things done. I had a good background then.

Jerry: Where'd this lead you to?

Ed: From Hotchkiss, Colorado, we made a BIG move as a job came open in Berlin, New Hampshire. It was an assistant's job but it was a promotion. When I got the assistant's job at Hotchkiss, I became a GS-9 but this was a GS-11 assistant job in Berlin, New Hampshire. It was kind of a, "Why am I doing this" type thing, you know. So I put in for the job and low and behold I got interviewed and the gentleman, the manager, of that the place was Henn Gruenthal. He did some pretty good arm-twisting.

So I decided, "Well here's our opportunity to see the other part of this country." And so we accepted the job - Kathy and me because we were partners then pretty much. And of course we had two little girls. They were 2 and 4 years old so we drove all the way back to Berlin, New Hampshire. We got there in March. And when we got there you couldn't, you literally could not see the house because the snow was so high. We got to thinking, "What did we get ourselves into?" And Berlin, the hatchery itself was, was like 20 miles out at the end of a road in the National Forest so it was pretty isolated place.

Jerry: But a trout hatchery.

Ed: It was a trout hatchery. Different trout. In fact they raised three species there - brook, brown, and rainbow. It was in Region 5 where Atlantic salmon was king. It was one of only two trout hatcheries in the Region. We were kind of low on the totem pole as far as the funds. And the hatchery was run down pretty badly, lots of maintenance needed. It was a small staff there was with just me, a fish culturist, the maintenance man and Henn. And I was there for a year and a half but it was probably more fun working out of that hatchery than any other hatchery I was on. It was so challenging to work there. I mean you literally had fish under ice 4 months of the year. And so it raised a lot of unique problems dealing with the weather and water, a lot of water problems. We had a lot of water chemistry problems there and they had difficulty raising fish. Apparently for several years they weren't meeting their production goals both as far as to size of fish and numbers of fish. There were some problems. One of the things that we accomplished, at least the year and a half I was there, was to try to meet production goals. We had to try and get some growth under ice and...

Jerry: So was your problem temperature or diet?

Ed: What they usually did there is when the fish went under ice they wouldn't feed them. Well they would try to feed them. What they used to do was break the ice open and they would freeze great big blocks of ground up liver like popsicles, and they would throw the popsicles in the water.

Jerry: Liver popsicles.

Ed: Liver popsicles. So assuming that the fish would eat off these things, we figured we needed to get something else to grow these fish in the winter. It was always said you can't grow fish when the water got really cold down in the low 30's, 32, 33 degrees. There were some experimental diets out for cold water.

We came up with an idea to build some boxes out of plywood and line it with Styrofoam. We placed candles in there to keep the water open and we were able to hire a bunch of, at that time, a bunch of YACC and we got them to start feeding the fish in these boxes in open water during the winter with this special cold water diet that was developed. The kids would go up there every hour or so and open up these boxes. They would start feeding the fish and after a while the fish started learning to come to this box. We were feeding quite a bit of feed to the fish and after the ice broke up we literally found that we were getting anywhere from a three quarters to an inch to an inch of growth on the fish over the 4 months they were under ice. When the ice broke out we were ahead of the game and we were able to get the fish to size and meet our commitments to the state of Vermont and the state of New Hampshire for that winter and over that next year.

The other thing that was unusual about the hatchery was the distribution. It was unusual because we had a truck, the distribution truck from hell. It basically had three compartments in it but it was so old that it actually leaked water. It would drip water and there was no money available to buy us a new tanker truck. So we literally had to rush to plant the fish before we ran out of water in the tank. I remember one trip in particular. It was an overnight trip to Fort Drum in upstate New York. We would load the truck like three in the morning and we would drive all day and we would get to Fort Drum like four in the afternoon.

We had this trip to Fort Drum and it took two of us to drive in shifts. We'd stop every once in a while check the water. The truck seemed to be leaking a lot more and we were down oh probably couple two, three hundred gallons and I was getting worried. So I said "We need to get some more water into this truck." We found some farm some place, drove up there and asked the guy if we could get some water. He got his garden hose out and we started filling up the truck. It took us about 45 minutes to put enough water in the truck so we felt comfortable enough to get to where we were going.

Once we get to Fort Drum we'd lost some more water. Fort Drum had all these quarries with the little lakes. But the roads to the lake were all roads that they did tank maneuvers on. They were all washboardy, you just bounced up and down. It just shook the truck up, I mean it was like being in a blender I guess. But we managed to finally get all the fish off the truck and it was about nine o'clock at night. We finally get to bed in a motel room at almost midnight. Then drive back the next day. That was a trip that I will never forget. And that truck, it was just unsafe to be used but somehow we accomplished it. I mean we literally had rubber bands on the choke and used paperclips to keep the pumps running. It's a miracle that we...we survived that truck.

Jerry: And all the fish survived?

Ed: The fish survived well from Berlin, New Hampshire. I'll have to say that Henn Gruenthal, the manager there, became really a mentor to me for the rest of my career. And that was a year and a half yhat I worked there. I enjoyed my work but I worked long hours at that place because it was such a difficult place to do things. Well there was a job that came open, a manager's job at North Attleboro, Massachusetts. He encouraged me to put in for the job and said, "You will probably get the job if you put in for it." And I said, "Well Henn I kind of want to go back out West you know. I'm not sure if I want to stay out East that much longer, I'm looking for something western." He says "Hey you go down you get that job, you won't be there long." So I put in for the job and low and behold I got the manager's job at North Attleboro, Massachusetts NFH.

Jerry: As a GS-11?

Ed: Yes, it was a lateral too. I lateraled from an assistant level to manager's level.

Jerry: But there was the increase in responsibility and prestige.

Ed: Yeah, yeah. Now I was in control of a budget and stuff like that and I enjoyed it there. I was only there a year and a half. Henn called me up one afternoon after I'd been there about 14 months or so. He said, "Hey, there's a job down here in Arkansas that I think that you can get it if you want it." I said, "What's that?" He said, "It's at Greers Ferry, Arkansas. It's a big trout station below the dam down there." And I said, "Well it's going west but it's not way out West." And he says "Yeah but it's going that direction and I'm sure if you put in for it you'll have a good opportunity to get it and you probably won't be there very long." So I put in for the job and low and behold I got it so we moved to Greers Ferry NFH, Arkansas.

Jerry: Was this also a GS-11?

Ed: This was GS-11 also, so it was another lateral. But it was moving west and it was a bigger hatchery and it had a unique thing happening to it. It was a hatchery that had problems for years and years and years with manganese in the water. But before I got there they had solved what was causing the problem. They had a bi-level intake system at the dam and the water level where they were taking the water was a level where they would get manganese. What happened was when the fish got up to about 7, 8 or 9 inches long, they would start dying. They would lose half the production every year because of manganese poisoning. So they solved the problem by putting in another intake so they had a tri-level intake system. They put in another intake lower into the dam and so they had a three level intake system and this was to get them away from this manganese problem. And what it did was to change the whole production of the hatchery.

It use to take 18 months to grow a 9-inch fish. The release size was a nine inch fish. And with the new water, all a sudden the production program went from an 18 months down to an 11-month program because they had some warmer water. And so they whole production program changed -- all of a sudden it went from 120,000 pounds a year to close to 300,000 pounds a

year and it changed the whole cycle from 18-months to 11 months. So you had to rearrange everything as far as when you got your eggs, the distribution and the whole works. It was kind of fun to re-tool the whole production with a new system.

It was also a trying time during that time frame because with low budgets and a lot of pressure on closing some hatcheries, there were hiring freezes and things like that. I ran that hatchery with myself, two fish culturists and a secretary. I didn't have an assistant manager because at the time he went to Leetown for the nine-month course in Hatchery Management. And so I had a whole year there without an assistant. When he came back, he was there 2 months. The manager at Chattahoochee Forest NFH retired and they asked this young man to go as acting manager at Chattahoochee. So I spent almost two and a half years there without an assistant manager and the same time was redeveloping the whole program and going from a 120,000 pounds to 300,000 pounds fish production. It was big job and I had a small staff.

Jerry: What was that program? State management or was that federal waters?

Ed: It was mitigation for the dam, Greers Ferry Dam. The dam basically created a lot of trout habitat below the dam, which now is cold water. And there was 40 miles below the dam that no longer had warm water species in it. It basically became all trout and was mitigation for that dam. And it was one of these programs in recent times which has been questioned as to whether it's really a Federal responsibility or not and...

Jerry: But it was a Federal dam.

Ed: It was a Federal dam. And the hatchery's still there and seems to be a Federal responsibility. But it's one of those programs that when they look for closures and

anything like that, it's one of the programs that's also on the kind of yes or no type thing.

I was at Greers Ferry for 4 years. After Greers Ferry, I made my last move. The old manager I worked for at Spring Creek NFH retired and the job came open. Spring Creek is one of these hatcheries, that to people that have been in hatcheries, is also considered kind of one of the plum places to go. It's in a beautiful location on the Columbia River; they have a major program that's is important.

Jerry: What is the program there Ed?

Ed: The program there raised what is called Tule Fall Chinook for mitigation of the impacts to anadromous fish by Bonneville Dam. It's mitigation is unique because the Tule Fall Chinook had been raised at that hatchery now for over a 100 years. It's the indigenous stock to that area of the Columbia River and the White Salmon River, which is just a half-mile up river from the hatchery. And the Tule Fall Chinook, historically, have been a major component of the ocean sport and commercial fishery along the Washington coast as far north as British Columbia. And there's been years that literally half of the commercial catch and half the sport catch along the Washington coast were Spring Creek origin fish. It also plays a major role in the U.S.-Canadian treaty and all the negotiations as far as how many fish are going to be ocean caught and who's going to catch them and how many. So it is involved with political decisions.

Jerry: So you have this brand new hatchery all rebuilt so you must have been, nice easy job there, no challenges?

Ed: Well that wasn't the case I was selected for. I hadn't moved there yet and I got a call from Paul Handy in the Portland Regional Office. He actually asked me if I heard Paul Harvey today, the radio show. I said no. He said, "Well all your fish just died." Apparently there they had an outbreak of bacteria gill disease in the reuse system and basically lost about 12 million fish.

Jerry: Out of a program of 18 million?

Ed: Out of a program of 15 million. The program called 18 million but that particular year was a short year. They didn't have a full complement of fish on the place. There was some conversion over to a different species also. In negotiations with the tribes, they wanted to use another Fall Chinook called Up-River Bright Fall Chinook. They wanted Spring Creek to raise some of them and so they cut the Tule production to raise four, five million Up-River Brights. So they lost all the Tules and some of the Brights too. So I reported to the hatchery.

Jerry: A fishless fish hatchery.

Ed: Yes basically, and so it was also at a time when the Pacific Northwest was going through kind of a drought cycle. It started they think now 1977, 1978 and they were in the midst of a ten, twelve year somewhat of a drought cycle. And also at the same time there was some problems with the ocean. There seemed to be large cycles of El Nino's where you didn't have upwelling in the ocean and you had a poor feed supply for small fish. Survival was poor at the same time. And so there was some double whammies going on with the fish. And it just so happened that in '86 and '87 for some reason or another, there was some good ocean survival. They had some upwelling that year that would have been the year that these 12 million lost fish would have come back. Being Spring Creek, it was so important to the commercial and sport catches and all the fish harvest managers used Spring Creek stock as an evaluation base, they closed the ocean fishery two years to save the Spring Creek stock. But it also was at a time when all the other stocks were doing really well which kind of upset a lot of people. And in fact those years when that 12 million fish were to come back to the Spring Creek hatchery, some of the other Columbia River hatcheries had some record runs. The Bonneville State Hatchery had close to forty thousand fish come back to the hatchery.

Jerry: And that was also a Tule Fall?

Ed: They were Tule Fall Chinook. Spring Creek got 792 fish back. And you know we were under the gun to get things turned around as quick as we possibly. It's not quick to turn things around when you had a lot of things maybe going against you. It was a challenging job and it took a while but near the end of when I retired, our returns had come back in major, major numbers. I retired in 2001 and excuse me 2002, and that year we had over 72,000 fish come back to the hatchery.

Jerry: From 792 to 72,000.

Ed: 72,000 fish, yes. From 1987 to 2002. It took a long time but we were building up all along to the point where they opened up the ocean fishery again. They started managing ocean fishery differently. Because of the ESA, Endangered Species Act, they started managing for the ESA stocks that were weak. A lot of the hatcheries started getting more fish back because they were restricting the ocean commercial and sport harvest on other stocks, not necessary the stocks that were not doing well. So as we started doing better and getting better survival, they still weren't catching as many fish as they used to be able to catch because they were managing for the weaker stocks.

And so the Spring Creek stock is healthy again and it's an important stock and actually is unique because Spring Creek raised the same stock of fish for a hundred years. I always thought that the reason they were successful was the fact that they were raising the indigenous stock, which is now, you know, one of the policies of hatcheries. That is what we should be raising; we shouldn't be moving fish all over the place from different water basins and water sheds. We should be raising the fish indigenous to the area and Spring Creek has also done that and so I think Spring Creek is a jewel amongst all the hatcheries because it does. It's one of the ones that does raise an indigenous stock and is successful and while the genetics of the fish probably aren't the same as in the White Salmon but are pretty darnn close to it.

Jerry: Not all of these are wild indigenous fish though; some of your detractors will tell you they are hatchery fish.

Ed: Yeah, well this is true but...

Jerry: Not wild fish.

Ed: Yes, but you have to remember that the Fall Chinook are raised to only 3 inches long, so they're not on a hatchery a long time. Too, the Spring Creek program was built on not just fish in the hatchery. They historically had a large program called un-fed fry where they would release un-fed fry when they had surplus. So these are fish that are just hatched out, that are buttoned-up and never seen the inside of a concrete raceway. Basically they're put in the river and have to fend for themselves, just like wild fish. And through studies they know that un-fed fry don't survive as well as the fed fish do but they do survive and they do comeback and so those fish are passing on certain genetic materials. I think they're as close as you're going to get to a wild fish.

And also nowadays, hatcheries are changing, doing a lot of work in changing in how they raise fish. They're changing the environment of the raceways or ponds, they're looking at different ways to feed fish, they're looking at ways to make fish more adaptable to their outside environments when they leave the hatchery. Surely they're not going to be the same as a wild fish but we could do things and help them survive better and be more adaptable in the wild and be less detrimental to wild stocks.

Jerry: We have been talking off the record here a little bit about the fish culture and some of the other issues that you had to deal with Ed, and one of the things you were just relating to was that the wild fish superiority and the whole fish culture mythology.

Spring Creek needed to review its role and what did you do?

Ed: Well when I got there after they lost all those fish, the first year I kind of watched and see what and how things

were, what we were doing and of course, I reviewed a lot of the past production history. It was obvious to me that we had needed a change to a lot of the fish culture techniques. We needed to get back to basics; there was a lot of things that they weren't doing that should've been done. First off, it's a reuse system and the water is 30,000 gallons a minute going around in circles in a rectangular pond.

Jerry: Excuse me, reuse or reconditioned?

Ed: It was 95% reuse. We have two thousand...

Jerry: But the water was reconditioned through oyster shell beds...

Ed: Through oyster shell beds, bacterial filters. And so the water is going around in circles so everything is connected. So if you have 44 raceways, and if you got one raceway that's gets sick, they're all going to get sick. I mean you can't isolate anything, it's not like other hatcheries where you can isolate maybe isolate a problem. Here you can't isolate anything. So sitting with the crew and talking with them, I basically challenged them that we needed to change how we did things. And these were some of the things we needed to do.

They were really helpful, they had a lot of good ideas and they were willing to go the extra mile to change how we did things. Operations like cleaning, cleaning the system more, making sure the ponds are clean, making sure the filter beds were clean, making sure all the mortalities collected. We needed to improve the egg eye-up. Historically for the last fifteen years or so the egg-eye-up had been down in the low 80% - not good. So we kind of used the shot gun approach during spawning and we started changing how we handled the adults and changing, changing how we used the adults. We started using more males. I convinced them we needed to maximize more males for genetic material. We took better care of the eggs and all of a sudden within a couple of years our eye-up started jumping up big time. Within 3 or 4 years we were averaging 95 to 96 % eye-up. So our survival of eggs improved. We had problems

with soft shell on the eggs. The eggs would get to a certain stage and you couldn't even touch them, they would break open because the shells would get really soft. And so we investigated some things and we came up with the idea of treating the eggs three times a week at small concentrations with iodine at just 10 to 15 parts per million. It'd been working at Ennis National Fish Hatchery. Manager Wes Orr was telling me about it because they had a soft shell problem and they used that method. We started using it and low and behold our soft shell almost disappeared. And so we cut down a lot of the work. When they had to clean the eggs to remove any dead or unfertilized eggs, it was a major, major deal because they were losing 20 % of the eggs to soft shell - they would just disintegrate.

Jerry: You'd have all this yolk material to smother the embryo.

Ed: Yes, yolk material and they'd have to overcompensate. They'd have to take maybe 60 % more eggs than they normally had to just to make the production program.

Jerry: If you were still spawning 5,000 females year?

Ed: We needed to at least spawn 4,000 females to get 20 million eggs. It got to the point the escapement goal at the hatchery, meaning these are the number of adults we needed to get back to the hatchery to make production needs, was 8,000 fish. Well over several years all of a sudden we got better eye-up and got better quality eggs, we could lower the escapement goal down because we didn't need as many fish back anymore. They lowered our escapement down to 7,000 of which 4,000 would be females. They use to have to take 25, 26, 30 million eggs to make production now we only needed 20 million to make production.

And so you know one of the things I found there was that the crew that worked at the hatchery lots of times had good ideas. It was just the matter of empowering them, bringing it out of them and sometimes some of these ideas are way off the wall and some of them are not going to work and what not but by gosh, a lot of them do and a lot of them make a big difference. For example, one idea one of the guys had was the ponds at the Spring Creek are rectangular ponds and the water goes around the circles. The water comes in through multiple spigots on each end. There's about seven or eight jets. He suggested that we block the top jet with a pvc pipe to prevent the surface water from being agitated. When we first start feeding the fish it's a dry feed that floats on the surface. Well by agitating the water, that feed would sink quicker and go to the bottom and we'd get a lot of wastage, out of the reach of the fish. By blocking that top spigot we had a smoother surface. We found out that we used less feed, the ponds stayed cleaner, the system stayed cleaner and the fish were in a lot better shape. So we would leave that plugged spigot until the fish got bigger, until we got the bigger size of feed where that feed wouldn't float. It would hit the surface and start sinking and get eaten right away. So a little thing like that probably saved the hatchery a lot on cleaning, water quality was improved, fish were healthier and it was just a simple idea, just a matter of listening to somebody and saying, "Hey that's a good idea Fred" or "Al, let's try it," and I found out that empowering somebody with an idea is really important and was really useful for me in managing.

Jerry: So you spent your last 18 years at Spring Creek and before your retirement that took you what 37 years.

Ed: Just about 37 years.

Jerry: ...a career with the U.S. Fish and Wildlife Service and all of it was in fish hatcheries.

Ed: I was all in fish hatcheries.

Jerry: Throughout the country all hatcheries with trout or salmon species.

Ed: Yeah, but I did dabble a little bit one year at North Attleboro with walleye pike.

Jerry: Looking back, is there some highlight just something that really pushed your button that you really felt a great deal of satisfaction with?

Ed: Well my time at Spring Creek was really rewarding because basically I got there when the hatchery was down and the challenge of getting it back was the first time that I really realized that these fish we raised are important to a lot of people. When you have a lot of people actually depending upon these fish for their livelihood. So it was rewarding for me to get Spring Creek back on up on it's feet and the accomplishment of doing that, it made me feel good that I was helping people. Sometimes people don't realize that we do our jobs everyday and they think that it's a minimal job. We keep on doing it but we do affect people and we need to understand that.

Jerry: That sounded like a pretty highpoint. Did you have a low point in your career or things when you really say "How in the world did I every get here?"

Ed: Well I...like most people in hatcheries, occasionally you kill fish and I remember when I was at Ennis, Montana. I didn't kill the fish but Bill Baker the manager was gone, he was in town for part of the day and I was there by myself with another guy. The other staff were off on weekends or whatever and we had contractor working in our springs. We took an hour lunch and I lived on the hatchery and I was up at the house eating lunch and the contractor was eating his lunch but he decided to go back to work. So he was up at in the spring in his Caterpillar and some how or other he loosened up a whole bunch of watercress and it broke free and it came down and plugged the intake to the hatchery. When I get down to the hatchery, I noticed there's no water running into the ponds and several of the ponds, at the time you know Ennis was a broodstock hatchery and had a lot of broodstock. There

were fish dying and so I ran up the to the intake and got the guy off the cat and told him, "You plugged the intake up!" So we're down there trying to get the intake unplugged with I don't know how many pounds of watercress. There's three of us and we're raking this stuff up and we finally get some water coming through. When I get down to the ponds, there's lots of dead fish. I'm starting to clean the dead fish up. And so I get the pickup out and I'm putting the fish in the back of the pickup and these are some pretty nice four or five pound broodstock and here comes Mr. Baker. He's looking over where we're pitch forking fish in the back of the pickup to take up and put a big mort pit we have up on the hill. I was pretty low because since I felt I was kind of in charge and it was a freak accident. And I felt pretty bad about it. But Bill took me aside and told me not to worry, things like this happen and it's nobody's fault - it's just one of those things. But that was pretty low point for me...that day.

Jerry: Well continuing on in the same vein in reminiscing and thinking back, is there something that you'd wished you had done that you didn't do? You know had an opportunity, did you feel there was any missed opportunities' working with Fish and Wildlife Service in its fisheries program?

Ed: Well, you know, there was a time when I was assistant manager at Hotchkiss and Berlin that I might have had an opportunity to do something else outside of hatcheries and I didn't do it...and my career might of taken a different road. But I guess I wasn't bold enough or adventurous enough to do it and I stayed in hatcheries. I maybe kind of regret that a bit but then again I enjoyed all of the places I was at and the jobs I had. They were all different, meeting the different people. But if I'd done it over again, I might of tried doing something else for a period of time. And if I didn't like it I maybe would have gone back into hatcheries.

Jerry: What was your grade when you retired?

Ed: I was a GS-13.

Jerry: A GS-13, that's one of the highest grades, field grades in the fisheries programs.

Ed: Yeah! When I went from Greers Ferry to Spring Creek I was a GS-12 and I was a 12 for a couple 2 or 3 years. I was upgraded to a GS-13 and yeah, I never thought I would get that high.

Jerry: Ed, I'm going to ask you another question, on hatchery housing. Its been kind of a bug-a-boo of things over the years and there's been a number of affected people. I take it that you lived, occupied hatchery housing for most of your career.

Ed: I occupied hatchery housing most of my career except for the last 9 years. I moved off when I was a Spring Creek after Hatchery housing certainly was an advantage. When I first joined the Service it was so much easier and I'm sure it is easier for the office to move people around. I moved around quite a bit during my first 5, 6, 7 years. I mean it was easy because there was a place to go to. And nowadays it cost so much to move somebody

Jerry: Cost being more than just the transportation, picking up the cost for the sales.

Ed: Yes, but hatchery housing has always been a thorn in a lot of peoples sides. Rents have gone up and sometimes people feel that they're imprisoned. I look at it too, as a manager, it was nice to have. At some hatcheries, I think housing is needed. I mean there are some hatcheries that are so isolated, you do have systems that fail and sometimes alarms need to be answered. A lot of the hatcheries now that are near communities and with computerized alarms like that, response times are short, quick and so some of these houses probably aren't maybe necessary anymore. But there are still some places where I think houses are necessary, - it just depends on the facility. But back when I first started, as a trainee, having a house to go to surely made life easier.

Jerry: And was the house adequate?

Ed: Oh generally yeah, generally been maintained really well. It had a range and refrigerator and... ..everything you needed.

Ed: Yeah, and the first few years I was in hatchery housing, it was like a big community. I mean you had five, six houses on the place and at least the places I was at, everybody got along. There was always a lot of potlucks and functions like that and parties and it was kind of fun. Things change over the years like when I lived in the gorge area of Little White Salmon and Spring Creek in they early '70's. All the houses were full and everybody got along and there was a potluck almost every week . Some places like the lower Columbia River with three or four hatcheries in the area, every time somebody was coming or going there was always a party or something. And when I moved back in the '80's a lot of the people had moved off the hatcheries. A lot of the houses were empty and the demographics was different. A lot of the wives worked and now there were two wage earners in the family. The kind of close-nit family that you had on a hatchery with the workers and the kids and family wasn't there anymore. It was kind of a way of life, because once you move off the hatchery, which is maybe good for some people, it tends to pull away from that little bit of the family atmosphere.

Jerry: On another issue, after 37 years what's the trend that's probably caught your attention the most of what the Fish and Wildlife Service is doing now. Have you seen a trend that you can define?

Ed: Oh yeah! I mean it's certainly the issues are. There's a lot more issues, a lot bigger issues.

Jerry: Bigger meaning impacting more people?

Ed: Impacting more people, there's more people interested in what we're doing that's for sure. There's more offices, there's more people working on different things. I mean back when I started you had hatcheries and refuges and maybe a few field

offices that worked with river basins or something like that and now the issues are huge. There's more players in everything. The Service does a lot, a lot more decisions are made with partners, consciences' building. It's a different organization.

Jerry: All these big changes that you talking about, what do you attribute these changes to Ed, is there, there something you put your finger on? Legislation like the Endangered Species Act, Clean Water Act?

Ed: And court decisions.

Jerry: ...like the Boldt decision.

Ed: Yeah, I mean it's land issues, water issues...public interest, groups, there's a lot more groups. Environmental issues, outdoors activities, wildlife enthusiast and they're interested in photography and they're interested in fishing and they're interested in fish. So people are more involved and that makes the Service more involved.

Jerry: Do you think the Service is answering to this role?

Ed: I think they're doing their best? I mean there's always budget restrictions and things like this but the work force has increased dramatically. I believe the Service is involved with a lot more groups; I mean they, we have more partners then we every had. It seemed, you know, we're in all the issues that come up involving wildlife. We're, only going to get more and more. And there's probably successes and there's political forces that sometimes dictates some policies, maybe good or bad.

Jerry: Ed, given after 37 years here's a chance to talk, to name a couple of folks that you thought really, some fine folks in the Fish and Wildlife Service that had influence on your career, you already mention Henn Gruenthal. He was the Manager at Berlin at the time. Are there others?

Ed: Well...I guess the first manager I really worked for was Bill Baker at Ennis, Montana, and he was an old, old time grouchy manager. And I remember getting there and I didn't even have a uniform yet and I was out cleaning a pond with my pea coat jacket from the Army and it was snowing. And I was scraping the bottom of a pond with this four-inch scraper, scraping the moss off from the bottom of the pond. And I remember, I was out there and I was just glad to be back from Vietnam and it's snowing, it's cold but this is okay. And I'm looking up there and I'm look in the window at the incubation room and I see three or four of the guys at the hatchery looking out at me. And I can just hear them say, "What's that fool doing out there?" I can just see them, them thinking "What's that fool doing out there?" And I loved it and I remember Bill coming to me after about 6 months after I was there, he put his arm around me and he said, "Ed he says, you just keep doing what you're doing, you'll do just fine." And that was just enough encouragement for me to continue to do what I was doing and not fall into maybe poor work habits or anything like that.

Jerry: And he didn't ask you to join his bowling team.

Ed: Well I bowled with Bill at least two or three times a week. I had to sleep in bed with him one night. We went bowling and we couldn't get back because the snow was blowing so bad and it was like a blizzard. We had to stay in town. We stayed at his brother-in-law's place and I had to sleep in the same bed with him one night, which was an interesting experience. But Bill was Bill! I liked Bill. He was a worker. He was a manager, got his hands wet and I always liked him. Then there were some other people that I met but I'd never worked for, some of the old timers that were kind of, some times you'd almost call them legends in their time. Tom French at Leadville NFH was a character. Ray Johnson, another gentlemen. Glenn Hammer. These are some of the old time managers that did some crazy things and were forerunners in fish culture. I mean they were real inventive people and I really enjoyed being around them even though I didn't work with them.

Jerry: But they were people that enjoyed their work but they were still leaders and pioneers.

Ed: They were leaders and pioneers. Wayne Olson, I worked with Wayne Olson a little bit, and I enjoyed working with Wayne. He sometimes made me nervous because he's kind of fidgety but he was a good guy to talk to. Dave Bruhn was a good sounding board. You could always talk to Dave and he was a good listener and you always felt good with his advice. He was a good guy.

Jerry: I remember Dave as being one of those people that, like you say, was a good listener. He would come to a meeting and wouldn't say very much.

Ed: Wouldn't say much but when he did everybody listened.

Jerry: You know that's because he had boiled it down and could identify a strategy or what the issue was.

Ed: Right, he's sorely missed.

Jerry: You mentioned Paul Handy once...he retired shortly after you...

Ed: Well Paul retired after selecting me for the Spring Creek job. But the Service brought him back, I don't know on contract or something for a little bit to attend some meetings.

Jerry: He was the Fish & Wildlife Service representative to the Columbia River Inter-Tribal Fish Commission.

Ed: I remember taking training from him on defensive driving which he couldn't do today. I don't know if you ever took it from him I mean he'd have an EEO complaint right then and there. (Laughing) I mean he would tell off color jokes or something and here you've got women in

the class and all that, but you know you can't do things like that now.

Jerry: Well there's some folks you know, some of them were just doing their jobs and others seem to take that extra step like Henn or Billy Baker.

Jerry: I'm going to ask you now about anything that you want to say. We're kind of winding this thing up unless, thinking back of what we've already covered, all the issues we have talked about so far, is there anything that you want to reiterate or did you forget something or you want to leave a closing statement?

Ed: Well, I would just say that Fish and Wildlife Service was really good for me, it was great for me. I enjoyed everything I would encourage any young people that maybe be looking, are interested in a career in natural resources, that the Fish and Wildlife Service would be a great place to work. You have tremendous potential to go as far you want to go in the Service. It's rewarding, you'll meet friends that you'll all your life. Just go for it, if it's something you want to do, do it. I would say the other thing, I would say to anybody that's in the Service, a young person in the Service, is don't be afraid about moving. Be mobile if you can; especially the first few years in your career. Get as many different experiences as you can. I think that's really important. And then, you know, later on if you get into a place where you want to be then you know you can settle in. But take advantage of the Service and move around, do different things. Good luck!

Jerry: This will conclude our interview and I want to thank you very much for this important oral history interview. Thank You Ed.